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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/532,084 | 04/21/2005 | Takashi Yasumura | 050251 | 6480 |
| 23850 | 7590 | 07/03/2006 | EXAMINER | |
| ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006 | | | WU, IVES J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1724 | |

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/532,084 | Applicant(s) YASUMURA ET AL. | |
| | Examiner Ives Wu | Art Unit 1724 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

(1). Applicants' Amendments and Remarks filed on May 30, 2006 have been received and acknowledged.

Claim 7 is cancelled. Claims 10 and 19 are amended.

The rejection of claim 7 in the prior Office Action dated February 28, 2006 is removed in response to the cancellation in the Applicants' Amendments filed on May 30, 2006.

The objection of claim 10 is sustained because the summation of boundary value of component A of 50 wt% with maximum amount of components B, C, D would result in 101 wt%.

The rejections of claims 1-6 and 8-20 in prior Office Action dated February 28, 2006 is sustained.

Claim Rejections - 35 USC § 103

(2). The text of those Section Title 35 U. S. Code not included in this Office Action can be found in the prior Office Action dated February 28, 2006.

(3). **Claims 1~4 and 8~20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al (US20020055030A1) in view of Hendershot et al (US006441060B1), Hefner Jr, et al (US004618658) and Nagasawa et al (US004205018) for the same rationale recited in the prior Office Action dated February 28, 2006.

(4). **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al (US20020055030A1) in view of Hendershot et al (US006441060B1), Hefner Jr, et al (US004618658) and Nagasawa et al (US004205018), and further in view of Takeshi et al (JP 2000-351843) recited in prior Office Action dated February 28, 2006.

(5). **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al (US20020055030A1) in view of Hendershot et al (US006441060B1), Hefner Jr, et al (US004618658) and Nagasawa et al (US004205018), and further in view of Toshiro et al (JP 03-199230) for the same rationale recited in the prior Office Action dated February 28, 2006.

Response to Arguments

Applicant's arguments filed on May 30, 2006 have been fully considered but they are not persuasive.

In regard to the combining the prior art reference Okumura et al (US20020055030A1) with unrelated prior art references of Hendershot et al (US006441060B1), Hefner, Jr et al (US004618658), Nagasawa et al (US004205018), the prior art reference of Hendershot et al (US006441060B1) directs to foundry binder, the binder is made of polymeric components and has the advantages such as tensile strength not only applied to the fields of foundry mixes but also applicable to the fields requiring mechanical strength such as separator in the fuel cell of Okumura et al (US20020055030A1). For obviousness, it is not whether the features of a 2nd reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skills in the art. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

For other prior art references combined with Okumura et al (US20020055030A1) for the rejection of instant claim 1, they provide evidence of advantages of using the same component urethanized epoxy resin acrylate or methacrylate.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu

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Date: June 27, 2006

DUANE SMITH
PRIMARY EXAMINER

D. Smith
6-30-06